castration is practised in the male, and that the operators in these cases hardly apprehend any more danger in one case than in the other. Why then should the operation of extirpating a *diseased* ovarium be longer held up in terrorem? When circumstances demand it, we resolutely venture to tie the external and the common iliac, the innominata, and even the aorta. I am not, at least to any very great extent, an operating surgeon, but a professional life of thirty years has brought within my notice a number of cases of ovarian disease; and the result has been an increasing, and at length a decided conviction, that the period has arrived when the uniform fatality of this truly terrible disease will no longer remain as a foul blot upon the fair character of our profession.

Lithotomy—Bilateral operation, with Cases. By Paul F. Eve, M.D., Prof. of Surgery in the Medical College of Georgia.

It is not my intention to enter at length upon the subject of lithotomy, but merely to describe the operation I have performed, and to call attention to the rapid cure effected by it;—to make a few brief remarks, and to report some facts, leaving them to be judged of by others.

I have a decided preference for the bilateral operation over all others proposed for removing stone from the bladder, lithotripsy only excepted in favourable cases. No good reasons have ever been offered, why we should not cut the right as well as the left side of the prostate gland. A section of equal extent on both sides is, of course, equivalent to *one* of double the same length, such as is made by the lateral operation. The dangers of lithotomy are infiltration of urine, hemorrhage, or peritonitis.

Now, in which of the two modes of operating, the lateral or bilateral, is the least risk incurred? Which would the surgeon select to have performed upon himself; one long incision directly towards the internal pubic artery, with extensive division at the neck of the bladder, but with all the advantages of being on one side, and the facility of cutting from left to right, or two incisions of half the length, avoiding the arteries of both sides, and making only a small opening into this organ, thereby preventing infiltration of urine into the surrounding tissues?

The difference in the character of the wounds in the two operations, deserves also a passing notice. With the gorget, the scalpel, or the bisector of Dr. Stevens of New York, the parts are incised by thrusting these instruments into the bladder, and they cut from without in. By the instrument I use, the double lithotome caché of Dupuytren, the section of the tissues is made in withdrawing it, or by cutting from within out. Let any one, to satisfy himself of the difference of these two movements of the hand, the forward and the backward strokes, observe how a bone is sawed in two. He will find that he best succeeds in making a furrow for his amputating saw by several backward strokes, and that by completing this operation by these alone, when the bone is nearly divided, he effectually prevents it from splintering. The *extension* of the hand is accompanied with power, promptness, but with irregularity. The *retraction* or flexion of it, with ease, steadiness and precision. Or compare the section of the tonsils by the instrument invented by Prof. Gibson, a few years ago, and by Dr. Fahnestock's tonsilitome. In one, the division is made by a thrust of the cutting edge, in the other by drawing it backwards. He who has used both instruments will require no consultation to decide which makes the best operation.

The instrument I use, the lithotome caché of Dupuytren, is too well known to require a description.

In performing the bilateral operation with that instrument, the patient is prepared as in the ordinary one for stone. The instruments necessary are, a sound with a larger groove than the common one, a convex cutting edge scalpel, the double lithotome and calculus forceps. The existence of the stone being clearly ascertained by the sound introduced into the bladder, the surgeon makes a crescentic or semilunar incision in the perineum, midway between the anus and bulb of the urethra, with its convexity towards the scrotum. He commences on the right, between the anus and tuberosity of the ischium, and terminates at the same point on the left side. This section is continued down to the sound, in the membranous portion of the canal, when the beak of the lithotome is adapted to it, and fairly introduced along it into the bladder. The slight curvature of the instrument corresponds with that of the urethra in its introduction. The sound is now removed, and the lithotome may be made to touch the stone; it is now to be half turned upon itself, so that its concavity looks towards the rectum, its blades expanded, and the instrument steadily and gradually withdrawn in the direction of the incision in the skin. This is to be done by lowering the handle. The finger may now be introduced into the bladder, the stone felt, its long diameter ascertained, and the forceps employed to remove it. In the after treatment I recommend no dressing to be applied to the wound, and no catheter to be introduced into the bladder. The patient is left entirely in the hands of nature; has the advantage of lying on his back, or on either side, and is only required to be carefully watched. The recovery is often remarkably rapid, as some of the following cases will show. It is surprising to what extent the wound in the perineum does contract immediately after the operation.

Believing that my friend Dr. Ogier, of Charleston, was the first to use the lithotome of Dupuytren in this section of our country, I obtained the particulars of the two first cases reported, from him.

Case 1. *Furnished by Dr. T. S. Ogier, of Charleston, S. C.*—February 21st, 1835, I examined a youth from Augusta, Ga.,* 13 years of age, who had all the general symptoms of calculus in the bladder; a stone apparently of considerable size was found immediately upon introducing the sound. The patient could not tell how long he had been affected with it, and declared that he never remembers being without the present symptoms; to urinate he was obliged always to lay his breast upon the floor and elevate his pelvis by putting his knees on a chair, and in that position the urine would come from him; the stone being large, in any other position of the body than this, it would become engaged in the neck of the bladder, and in that manner obstruct the passage of urine through urethra; but when the pelvis was elevated, and the head and shoulders depressed, the calculus was thrown in the upper part of the bladder over the pubis, and the orifice of the urethra being left free, the urine flowed through it.

The stone being distinctly felt by the sound, we determined to operate, but before this was done, we thought it best to purge the patient well, and use other antiphlogistic means for two or three days; accordingly, the next day the bowels were well evacuated with solut. sulph. mag.; the diet, chicken broth. On the 24th, having first given an enema to empty the rectum, we performed the bilateral operation, by making a semilunar incision in the perineum, just under the bulb of urethra, commencing about half-way between the anus and tuberosity of the

* From Edgefield District, near Hamburg, S. C. and not Augusta.—P. F. Eve.

ischium on the right side, and terminating at the same point on the left side, then gradually deepening this incision until the grooved sound, which had been previously placed in the bladder through the urethra, could be distinctly felt with the point of the scalpel; a small opening was then made in the membranous portion of the urethra. Dupuytren's double lithotome caché introduced on the grooved sound into the bladder, the sound was then withdrawn, lithotome turned, its blades opened, and the operation finished by drawing out the lithotome, and thus dividing the bladder from within outwards. I then introduced my finger into the wound and carried along this; the forceps seized the stone and attempted to extract it; considerable difficulty was experienced in getting the calculus through the wound, on account of its size. This, however, was affected by using a little force, without either lacerating the wound or breaking the stone. It measured $2\frac{3}{4}$ inches in length, and $3\frac{1}{2}$ inches in circumference, weighed ℥i. and ʒiii, was kidney shaped, and composed principally of phosphate of magnesia and ammonia. The bladder was then injected through the wound with a little warm water; several small gritty particles came away, apparently little fragments of the calculus broken off by the forceps in seizing it. A small piece of lint was introduced into the wound in perineo.

The patient was then put to bed and kept quiet; the urine flowed freely through the wound in perineo for the two succeeding days; the pulse was 120 the day after the operation; patient complained of pain in the back and head; ordered a dose of castor oil. 25th.—Pulse 100; ordered no medicine; diet, corn gruel. 26th.—Pulse 100; patient feels well; wound looks healthy, and the urine comes a little through the penis. From this time the patient mended gradually, but the urine continued to be thick with a considerable quantity of mucous sediment; for this affection we prescribed a dose of weak decoct. of uva ursi and chamomile. The appearance of the urine improved gradually, and about four weeks after the operation, its colour and consistence became natural, the wound healing up entirely. The seventh week after the operation the patient left the city for his native place. I heard of him in 1837, (two years after the operation,) and no symptoms of the disease had returned, since which time I have heard nothing of him.

Case 2. *Also by Dr. Ogier.*—Mr. D. M., of Wilmington, N. C., came to Charleston to be operated on for calculus in the bladder. I performed the bilateral operation in April, 1838; a mulberry calculus $1\frac{1}{4}$ in length, and 2 inches in circumference, weighing ʒvi½. This patient recovered completely five weeks after the operation; no accident occurring during or after the operation.

The only thing remarkable about his case was the fortitude which he exhibited during the operation. He refused to be tied, and insisted upon it, that he would be able to remain perfectly quiet during the operation. He was told of the danger to which the least motion would expose him. During the whole operation he remained as motionless as a dead subject.* The age of the patient was 40 years.

Case 3.—*Mulberry calculus*—bilateral operation—patient well on fourth day.

Oct. 1841. Having previously prepared my patient, a mulatto boy, 8 years old, and from a neighbouring county of this state, I operated with the instrument already mentioned, and in the manner described. The calculus proved, as had been predicted, to be small, weighing two drachms, and of the mulberry variety. Our diagnosis of this was based upon the long and intense suffering of the patient, say six or seven years, and upon examinations made with the sound, while the finger was in the rectum. In this instance I applied a small piece of adhesive plaster over the wound in the perineum, and introduced a gum elastic catheter per urethram into the bladder. The urine passed off at first by this instrument, but it accidentally slipped out about twenty hours after the operation. Finding, at this visit, that by the effort of my patient, the water flowed through the urethra, the catheter was not reintroduced. No urine escaped through the section made in the perineum, except at the time of the operation; he wound

* He was not *mesmerized.*

contracted and soon became dry by coagulation of the fluids oozing out from it; the plaster did not adhere long, and on the third day my little patient would have gone into the streets, but for a change in the weather. On the fourth day he was out and well.

Case 4.—*Large calculus*—very rough, adhering to the bladder—Bilateral operation—patient up, and nearly well on sixth day.

Last May, I operated in Warrenton, 50 miles above Augusta, on a grandson of the late treasurer of Georgia. The patient was six years old, and had suffered from symptoms of stone from 12 months of age. It was attributed by his mother to the introduction of a needle into the urethra by a vicious nurse. This patient being very ungovernable, some embarrassment was experienced in fitting the beak of the lithotome to the groove of the sound, and also in the adhesion of the stone to the bladder, which had to be torn away with the forceps, from a point high up in that viscus. It weighed four drachms, and was quite rough upon its exterior. No metallic nucleus was detected in breaking it up.

The recovery is detailed in the following extract from a letter from my friend Dr. Wm. P. Butt, to whose judicious care the patient was committed. Before I left him, twelve hours after the operation, he had urinated twice, first by a gush with coagula of blood through the wound in perineo, and the second time pretty much in the same manner, with some drops through the urethra. Dr. Butt writes five days afterwards, "The operation has proved completely successful. The boy is up about the room, and experiences no difficulty in urinating. The wound is nearly healed. The second day after the operation he had considerable fever, with pain in his stomach and vomiting, which subsided upon moving his bowels with blue pill and magnesia. I consider him entirely out of danger—he is in fine spirits, and talks of the prospect of wearing breeches instead of his slips."

I heard soon after this of his perfect restoration to health.

In support of the bilateral operation, I could cite very high authority. As early as 1748, it is well known that Frére Come performed the lateral operation with a peculiar instrument, which he called the lithotome caché, and which cut from within outwards. Samuel Cooper says in reference to this operation, in the last edition of his Surg. Dictionary, "I think, that for a surgeon, who understands the right principles of lithotomy, this is one of the best ways of performing the operation." It is said that Dr. Physick performed the bilateral operation in 1804, with a kind of double-edged gorget. Sir A. Cooper also used occasionally a doubled-edged scalpel, and so has Sir B. Brodie. Chaussier, in 1805, made some experiments upon the subject of a semilunar incision in the perineum, for the purpose of entering the bladder and extracting calculi. In 1813, Beclard made some attempts in the same direction; but it was not until 1824, that the celebrated Dupuytren fully established the advantages of the bi-oblique or bilateral operation.

These he enumerated as follows: 1st. The great facility of performing it. 2d. Situation of wound in widest part of lower aperture of pelvis, and consequently most favourable to extract large calculi. 3d. The shorter and more direct passage to the bladder. 4th. The ready escape of urine through the wound. 5th. Sufficient size of wound, without being dangerous. 6th. The ejaculator ducts more safe from injury. 7th. Method applicable to both sexes.

Finally, I quote the language of our highest authority in surgical literature. When the stone is known to be of ample size, the bilateral operation, I think, merits the preference to all ordinary plans. (*Samuel Cooper.*) Experience demonstrates that, as a general rule, the urine takes sooner its natural course after the bilateral operation, than as a consequence of any other. Again; I do not see what prevents the bilateral operation from being adopted as the general method. (*Velpeau.*)